

REMARKS

I. Background and Introductory Remarks

Claims 26 – 27, 29 - 36, 46 and 47 are pending in the application prior to amendment herein. Claims 31 and 35 are cancelled herein and claim 46 is amended. In the Final Office Action mailed December 10, 2007, all of the prior art rejections formerly placed against claim 26 and the claims which depend therefrom were withdrawn. Now, the claims are newly rejected based on obviousness-type double patenting. Independent claims 46 and 47 are finally rejected under Section 102 and Section 103 as well as on the basis of obviousness-type double patenting. Reconsideration is requested in view of the above amendments, the remarks which follow and the terminal disclaimer submitted herewith. It is urged that in view of these all of the claims are in condition for allowance.

At the outset it is urged, the amendment to claim 46 should be entered because it presents no new issues and the same subject matter has already been searched with respect to claim 26. Recall, also, that the subject matter of claim 46 once depended from claim 26. Claim 46 now closely parallels the limitations of independent claim 26.

II. Rejections Under Section 102

Claims 46 and 47 are rejected under Section 102(b) as anticipated by Lee et al (US 2003/0031905). These claims are based, in part, on subject matter formerly presented in claims 31 and 35. In the final office action the Examiner states that the rejections of claims 46 and 47 are sustained because applicants did not discuss reasons for disagreeing with the rejections of claims 31 and 35. Actually, each of these claims presents subject matter which is different from the examined claims 31 and 35. Applicants request reconsideration and removal of the rejections based on indisputable deficiencies between the claims and the Lee reference. First, it is noted that claims 46 and 47 both require a layer having a plurality of pores each defined by a wall and

“a ceramic coating on an interior surface of the wall ...” The Lee reference does not at all teach or suggest this structure. The rejection relied upon the TBC top coat 16 of Lee, but this is disclosed as nothing more than a porous zirconia applied on a bond coat 14. See Par [0044]. Thus the coat 16 is a layer in which pores are formed and is not a wall coating of the pores formed in a layer. This renders any effort to reject the claims as anticipated by the Lee reference totally inconsistent. With the pores of Lee formed in a layer of zirconia, there is no coating on the walls of the pores. This rejection cannot be sustained. It is only the applicants who teach a coating on the walls of the plurality of pores.

Thus, while claim 46 requires a porous layer with pore walls having a coating of ZrO_2 , or $Y_2O_4-ZrO_2$, the prior art at best discloses a layer of zirconia with no wall coating. With regard to claim 47, the combination further distinguishes over the prior art because it also requires that the porous layer comprises MCrAlX. For all of these reasons it is not possible to reject claim 46 or claim 47 based on the Lee reference.

Claim 46 is also rejected under Section 102 as anticipated by Bamberg et al. (U.S. 5,721,057). Claim 46 has been amended to now require subject matter previously presented in claim 26 in order to more fully distinguish over the prior art, i.e., a porous layer

“characterized by sizes of the pores decreasing as the layer extends toward the outer surface.”

The amendment to claim 46 should be entered because it presents no new issues and the same subject matter has already been searched with respect to claim 26. Recall, also, that claim 46, which once depended from claim 26, now closely parallels the limitations of independent claim 26 and there is no reason to not allow claim 46 over this prior combination. Claim 47 should be allowed over the Section 103 combination for very similar or identical reasons that claim 26 is allowable over the same combination.

III. Rejections Under Section 103

Claims 46 and 47 have been rejected under Section 103 on the same basis previously presented for canceled claims 31 and 35, but applicants have already presented the Examiner

with distinctions which render these obviousness rejections incorrect. The claims have been rejected under Section 103 based on Paul and JP 2000-301655. This combination, so far as it relates to claim 46 is now moot in view of the above-noted amendment wherein claim 46 now requires that the porous layer be “characterized by sizes of the pores decreasing as the layer extends toward the outer surface.”

As for claim 47, applicants again claim a porous layer, this time wherein the porous layer comprises MCrAlX. The disclosure in JP 2000-301655 of a porous layer of MCrAlX is for an undercoat and this layer would correspond to applicants’ claimed substrate since the reference also describes a porous TBC. See pars 18 – 20. Thus a combination of Paul and JP 2000-301655 would not substitute the porous layer of Paul with the layer of MCrAlX. The references would have to be reconstructed to provide the claimed combination. There is no basis for taking an undercoat layer, used as a substrate, to replace the porous layer of the Paul reference. At best, it might be permissible to replace the substrate of Paul with the layer of MCrAlX. For these reasons, the combination does not result in the invention of claim 47.

IV. Rejections Based on Double Patenting

The Final Office Action also provisionally rejected claims 26, 27, 29, 30, 32-34, 36, 46 and 47 on the basis of obviousness-type double patenting over claims 35-54 of Application No. 10/578,425, alone or in combination with JP 2000-301655. Since this is a new ground of rejection, applicants now submit a terminal disclaimer with this amendment in order to overcome the rejection.

V. Conclusion

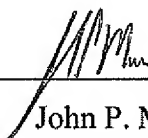
Applicants have amended the claims to fully distinguish over the prior art without presenting any new issues. Further, the rejections based on double patenting are rendered moot based on the submittal herewith of a terminal disclaimer.

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For all of the above-stated reasons it is submitted that the claims are allowable over the prior art and the application is in condition for allowance. It is submitted that no fees are required for filing of this amendment. However, the Commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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